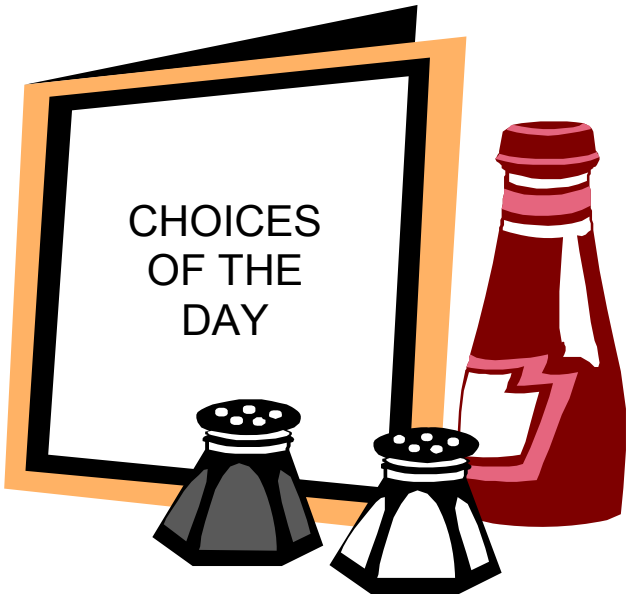
RCCI
MENU PLANNING METHODS TO MEET THE NUTRIENT STANDARDS



CHAPTER 3

RCCI MENU PLANNING METHODS TO MEET THE NUTRIENT STANDARDS

MEETING THE NUTRIENT STANDARDS

This chapter discusses ways of meeting the nutrient standards for the National School Lunch Program (NSLP). These are some of the questions that will be answered:

Why must we meet New Guidelines?

In order to provide the best meals possible and provide the nutrients required to sustain optimum health and growth of children, the Food and Nutrition Service (FNS) of the USDA issued regulations which took effect on July 1, 1996, called the School Meals Initiative (SMI) for Healthy Children. Meals should at least meet the age appropriate Recommended Dietary Allowances (RDA). Programs need to pay more attention to meeting the requirements for calories, vitamins, minerals, higher fiber and lower saturated fat and salt.

An additional incentive is that it is necessary to follow USDA Dietary Guidelines for Americans (DGA) in order to claim breakfast and lunch reimbursement for the meals served.

What do we want to Accomplish?

USDA School Meals Initiative for Healthy Children – Nutrition Goals

Recommended Dietary Allowances (RDA)

- ¼ RDA for appropriate age/grade group for breakfast for protein, calcium, iron, vitamins A and C
- 1/3 RDA for appropriate age/grade group for lunch for protein, calcium, iron, vitamins A and C

Recommended Energy Allowance (calories)

- Appropriate for age/grade group

Dietary Guidelines for Americans*

- Eat a variety of foods
- Limit total fat to ≤ 30% of calories
- Limit saturated fat to < 10% of calories
- Choose a diet low in cholesterol
- Choose a diet with plenty of vegetables, fruits, and grain products
- Choose a diet moderate in salt and sodium

*****The Dietary Guidelines recommend that after 2 years of age, children should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat and less than 10 percent of calories from saturated fat. (Based on 1995 DGA)

What are the Nutrient Standards?

Nutrient standards are values based on the RDA and DGA's. They include standards for calories and the nutrients necessary for growth and metabolism established for various ages. Vitamins and minerals which are frequently low in children's diets are included in the SMI nutrient standards.

NUTRIENT STANDARDS

	K-12	K-6	Grades 7-12	
Nutrient Standards	**Breakfast**	**Lunch**	**Breakfast**	**Lunch**
Energy Allowances (calories)	554	664	618	825
Total fat (g)[3]	18[1]	22[1]	21[1]	28[1]
Total saturated fat (g)[3]	6[2]	7[2]	7[2]	9[2]
Protein (g)	10	10	12	16
Calcium (mg)	257	286	300	400
Iron (mg)	3.0	3.5	3.4	4.5
Vitamin A (RE)	197	224	225	300
Vitamin C (mg)	13	15	14	18

[1]Total fat not to exceed 30 percent of total calories over a school week.
[2]Saturated fat not to exceed 10 percent of total calories over a school week.
[3]The grams of fat will vary depending on the actual level of calories offered.

Foods containing these nutrients typically contain other essential nutrients not specified in the nutrient standards. While there are no quantitative standards given by FNS for cholesterol, dietary fiber, and sodium, they need to be monitored. **The State of Idaho does and will monitor these standards.**

Additional Idaho Standards

Sodium:	2mg/Kcal
Fiber:	1gm/100Kcals
Cholesterol:	75mg – Breakfast - All Grades
	100mg – Lunch - All Grades

Weekly Averages

After being planned, the menus will be analyzed over a school week. It is difficult to meet nutrient standards daily; averaging over several days allows some flexibility.

School Week Definition

For the purposes of NSMP, a school week is defined as a minimum of three consecutive days and a maximum of seven consecutive days. If there are fewer than three consecutive days in a week (from Sunday to Saturday), those menus may be combined with either the previous or the following week.

Most RCCIs will have a seven day week that will include Saturday and Sunday.

What Choices among Menu Planning Systems do I Have?

There are five menu planning choices:
1. Nutrient Standard Menu Planning (NSMP)
2. Assisted Nutrient Standard Menu Planning (ANSMP)
3. Enhanced Food Based Menu Planning (EFBMP)
4. Traditional Food Based Menu Planning
5. Any reasonable approach

When implemented correctly, each of the five menu planning approaches can help you offer meals that meet the SMI nutrition goals.

Do I need to use Cycle Menus?

No, it is not mandatory, but using cycle menus developed for breakfast and lunch will save time and increase efficiency. It will also ensure that nutrient standards are met on a weekly basis, because the same menus are repeated through each cycle.

Cycle menus are menus that are developed for a certain length of time and repeated on a periodic basis. For example, menus can be planned for four weeks and repeated during the school year. There is no time requirement, so the length of the cycle depends on the RCCI's preference.

Do I need to use Standardized Recipes?

Yes, a standardized recipe is one that has been tried, adapted, and retried several times for use by a given food service operation and has been found to: produce the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients.

What are the Advantages of Standardized Recipes?

- Standardized recipes help ensure product quality because they:
  - Provide consistently high quality food items.
  - Yield the same amount of product each time.
  - Provide consistent portion sizes.

- Menu planning can be more consistent because:
  - You can accurately predict the number of portions from each recipe.
  - A predictable yield will help eliminate excessive amounts of leftovers and substitutions.

- Costs are easier to control because:
  - Exact amounts of ingredients are specified.
  - You can better manage purchasing and storage.

- The same good results can be produced time after time because:
  - Food service workers have more confidence in what they are doing.
  - Managers can be sure the nutrient analysis of a recipe will be accurate as long as ingredients and preparation methods remain the same.
  - Residents will be happier with consistent food quality.

What are Some Good Sources of Standardized Recipes?

The following USDA materials or web sites contain standardized recipes for school meals:

- USDA Quantity Recipes for School Meals
  http://www.fns.usda.gov/fdd/recipes

- A Tool Kit for Healthy School Meals: Recipes and Training Materials
  http://www.nfsmi.org/Information/school_recipe_index_number.html

For more detailed information see "Measuring Success with Standardized Recipes" manual from NFSMI and Team Nutrition. The Idaho State Department of Education offers classes on Standardized Recipes if you need further direction.

Nutrient Standard Menu Planning (NSMP)

Nutrient Standard Menu Planning (NSMP) is a nutrient-based menu planning approach that uses USDA approved computer software to analyze the specific nutrient content of menus. Reimbursable meals are based on planned menus meeting the required age/grade-appropriate nutrient standards, averaged over a school week.

This approach is designed to give menu planners flexibility in planning menus that meet the nutrient standards. The analysis must be periodically updated to reflect any changes in the menu, products purchased, or student selection patterns.

If a program takes the responsibility for planning and analyzing its own menus using a computer, it is said to be using NSMP.

Assisted Nutrient Standard Menu Planning (ANSMP)

Assisted Nutrient Standard Menu Planning (ANSMP) is a variation of Nutrient Standard Menu Planning. It is for SFAs/RCCIs that lack the technical resources to conduct nutrient analysis themselves but want to use a nutrient-based menu planning approach. Instead,

SFA/RCCIs use an outside source such as a consultant, another SFA, or the State agency, to plan and analyze menus that are based on local needs and preferences. This approach requires contracting with an outside source to provide the service.

The outside source must provide SFAs/RCCIs with recipes, product specifications, and other documentation to support the menu analysis. The menus and analyses must be periodically updated to reflect any changes in the menu, food products, or resident selection patterns.

Enhanced Food Based Menu Planning (EFBMP)

Enhanced Food Based provides a menu plan that is very similar to the Traditional Food Based. It is an enhancement to the Traditional Food Based. The food components are the same, but some quantities are increased. **Nutrient standards must be met**, but the SFA/RCCI is not required to conduct a nutrition analysis on the menus. The State agency will conduct a nutrient analysis at the time of the review.

Traditional Food Based Menu Planning (TFBMP)

Traditional Food Based is the name for the meal pattern used before the regulations took effect in July 1996. Traditional Food Based may continue to be used, with State permission, if the person responsible for menus presents convincing reasons that the menus meet the nutrient standards.

The Traditional Food Based Menus are **not required** to meet the extra servings of grains/breads and vegetables required under the Enhanced Food Based System. **However, the nutrient standards must be met regardless of the system chosen.**

Any Reasonable Approach

A fifth menu planning option has been approved. Contact your State agency for further guidance.

Making the Menu Planning Choice

The choice of which menu planning system to use will depend upon many things, such as whether or not you have or can purchase an adequate computer, your level of computer interest and skills, and the time available to input data and do the analysis. If you do not plan to use a computer, consider the Enhanced Food Based Menu Planning system. Please consult the last two pages of this section that summarize the differences between the Enhanced Food Based and NSMP systems.

Upon State agency review, menus will be analyzed and must meet the nutrient standards. The menus must be revised until the nutrient standards are met. Whatever method chosen, menus must be in compliance with the nutrient standards and DGA's.

The Advantages or Challenges to the Menu Planning Systems?

Advantages of NSMP and ANSMP (Assisted NSMP):

- You no longer have to serve 2 oz. of meat/meat alternate or any certain serving size. You have the flexibility to serve a broader range of foods, except foods of minimal nutritional value, as long as your menus when averaged over a period of one week meet the nutrient standards. A list of foods of minimal nutritional value (FMNV) is found in this chapter.
- All foods count in the nutrient analysis.
- NSMP may save you money since you do not have to serve as much meat/protein. You may serve vegetarian meals, as long as the nutrient standards are met for the week.
- The nutrient analysis provides immediate feedback to the menu planner on how well a SFA/RCCI is meeting nutrient standards.
- ANSMP saves time on data entry and saves money by not having to purchase hardware and software.

Challenges of NSMP/ANSMP

- You need USDA approved software, and computer skills.
- NSMP takes considerable time up front but cycle menus save time in the long run.
- With ANSMP someone else is planning your menus, so you may not have as much flexibility or be able to make menu changes with short notice (ANSMP).

Advantages of Enhanced Food Based/Traditional Menus:

- A computer is not needed.
- Many sponsors have already been serving large portions of food, so the quantities required for the Enhanced Food Based Menus may not represent major change.

Challenges of the Enhanced Food Based Menus are:

- Nutrient levels are unknown until the nutrient analysis is conducted. It is difficult to determine if the nutrient targets are being met without computer analysis.
- When the menus are reviewed by the State agency, if the nutrient standards are not met, the menus need to be revised within a short time frame.
- The Enhanced Food Based Menus may cost more since the 2 oz. of meat/meat alternate must still be served in addition to extra servings of grains/breads and vegetables/fruits.

Although the nutrient standards are the same for all menu planning systems, **different guidelines** are used to get to achieve the SMI nutrition goals.

More information on these specific menu planning systems and guidelines are included in this manual.

How are Substitutions Handled?

Substitutions/Emergencies

Occasionally it may be necessary to make a substitution to a planned menu due to various reasons such as food shortage, improper delivery from vendors, or effective use of leftovers. This is a concern because:

- Substitutions change the nutrient content; and
- Meals may or may not continue to meet the nutrient standard(s).

When food substitutions are made due to an emergency situation (e.g., food shortage), it may be impractical for menu planners to revise menus and recalculate nutrient amounts, especially if the emergency arises just prior to the menu being prepared. For this reason, USDA regulations require a sponsor on NSMP to reanalyze **if the substitution is known prior to two weeks before the menu is served.** If the sponsor is on one of the food-based menu planning systems but conducts its own nutrient analysis **and** wants the State agency to accept the nutrient analysis for the SMI review, it too must follow the two-week window guideline. Remember, reimbursable meals are based on the ability to meet the nutrient standards.

Two-Week Window

If the need to serve a substitute item or leftovers occurs prior to a “two-week window”, the week’s menus must be re-analyzed. The nutrient standards will need to be met with the substituted item. Other changes will need to be made if nutrient standards are not met.

When using NSMP or ANSMP to plan reimbursable meals, sponsors are expected to make substitutions only due to unforeseen circumstances.

Some examples include:

- Food shortage (food not delivered);
- Improper delivery (incorrect product delivered);
- Crop failure (food unavailable); and
- Significant cost increase in food item

The two-week window is defined as when the menu planner becomes aware of the need to make a substitution. For example, the two-week window is from the date the sponsor is made aware by a vendor that a food item will not be delivered. If a food item is shorted upon delivery to a site, without notifying the central office, the two-week window occurs whenever the school learns of failure to deliver. It is recommended that the sponsor include “immediate notification of inability to deliver” in the general conditions of the food bid.

Can I use Leftovers?

Leftovers can change the nutrient content so that meals may no longer meet the nutrient standards. Menu planners are reminded that NSLP regulations require sponsors to consider participation trends in order to provide one reimbursable lunch for each child each day. Every effort should be made to reduce the amount and frequency of leftovers. Proper use of production records will help reduce leftovers. A challenge for sponsors is to make effective use of leftovers while maintaining the integrity of the nutrient analysis.

Suggestions for Leftovers

If the quality can be maintained, leftovers may be frozen and used when the menu item is on the planned menu again. If not, the leftovers may need to be served within the week by substituting for another menu item or may be used as a substitute at a later date. The same two-week window rules apply to leftovers as apply to substitutions.

Sponsors are cautioned that any refrigerated leftovers should be discarded if not used within a safe period. Bacteria continue to grow even under refrigeration. Refer to the 2nd Edition of Serving It Safe for additional information.

What if I Cannot Obtain the Nutrient Analysis of a Product from the Manufacturer?

Sources of nutrient data other than CN Database are:

- Nutrition Facts Labels, often found on institutional-sized product packaging, even though they are not required. A sample Nutrition Facts label is included in this chapter.
- Nutrient analysis data from another reliable source, such as USDA's Nutrient Database for Standard Reference are at: http://www.nal.usda.gov/fnic/foodcomp/search

Do I Still Need to Keep Production Sheets?

Yes, program regulations require schools to keep food production and menu records. Federal regulations require that you keep 3 past years plus the current year.

NATIONAL SCHOOL LUNCH PROGRAM
FOODS OF MINIMAL NUTRITIONAL VALUE (FMNV)

These foods are considered to have minimal nutritional value and cannot be purchased with CNP 290 funds. These may not be served in the same area where reimbursable meals are served.

1) **SODA WATER** – As defined by 21CFR 165.175 Food and Drug Administration Regulations, (class of beverages made by absorbing carbon dioxide in potable water, etc.) except no product shall be excluded from this definition because it contains artificial sweeteners or discrete nutrients added to the food such as vitamins, minerals and proteins.

2) **WATER ICES** – As defined by 21CFR 135.160 Food and Drug Administration Regulations, except that water ices which contain fruit or fruit juices are not included in this definition.

3) **CHEWING GUM** – Flavored products from natural or synthetic gums and ingredients which form an insoluble mass for chewing.

4) **CERTAIN CANDIES** – Processed foods made predominantly from sweeteners or artificial sweeteners with a variety of minor ingredients which characterize the following types:

   (a) **Hard Candy** – A product made predominately from sugar (sucrose) and corn syrup which may be flavored and colored, is characterized by a hard, brittle texture and includes such items as sour balls, fruit balls, candy sticks, lollipops, starlight mints, after dinner mints, sugar wafers, rock candy, cinnamon candies, breath mints, jaw breakers and cough drops.

   (b) **Jellies and Gums** – A mixture of carbohydrates which are combined to form a stable gelatinous system of jelly-like character and, are generally flavored and colored, and include gum drops, jelly beans, jellied and fruit-flavored slices.

   (c) **Marshmallow Candies** – An aerated confection composed of sugar, corn syrup, invert sugar, 20% water and gelatin and egg white to which flavors and color may be added.

   (d) **Fondant** – A product consisting of microscopic sized sugar crystals that are separated by a thin film of sugar and/or invert sugar in solution such as candy corn, soft mints.

   (e) **Licorice** – A product made predominantly from sugar and corn syrup that is flavored with an extract made from the licorice root.

   (f) **Spun Candy** – A product that is made from sugar that has been boiled at high temperature and spun at a high speed in a special machine.

   (g) **Candy Coated Popcorn** – Popcorn that is coated with a mixture made predominantly from sugar and corn syrup.

*Petitions to amend these categories may be submitted on or before November 15, or May 15 of each year to: Chief, Technical Assistance Branch, Nutrition and Technical Services Division, FNS, USDA, Alexandria, VA 22302. **SOURCE:** Code of Federal Regulations, Title 7, Part 210, Appendix B.

BREAKFAST
SUMMARY OF THE DIFFERENCES BETWEEN
ENHANCED FOOD BASED AND NSMP

	Enhanced Food Based	NSMP/ANSMP (Assisted NSMP)
Menu Structure	A minimum of four required food items in specific quantities must be offered.	3 or more menu items 1 must be milk and any other 2 menu items
Nutrition Goals	¼ RDA for breakfast Dietary Guidelines for Americans Goals are age appropriate	Same as Food Based
Verification of Nutrition Goals	Not required to conduct a nutrient analysis, but must meet nutrient standards. Nutrient analysis completed by State agency	Weekly average nutrient analysis must meet nutrient standards.
Age/Grade Groupings	Grade: Preschool, K-12 (7-12 optional) (Can only be one grade above or below the pre-set grade/age groups).	Grade: Preschool, K-12 (7-12 Optional) or Age: 3-6, 7-10, 11-13, 14-17 or Custom Groupings
Creditable Items	Same as Traditional pattern, with the addition of 4 oz. yogurt creditable as 1 oz of meat/meat alternate.	All foods count (including desserts and condiments) except foods of minimal nutritional value unless these foods are combined with other creditable foods
Meat/Meat Alternate and/or Grains/Breads Alternate	1 oz. Each component or 2 oz. Meat/meat alternate or 2 oz. Grains/breads alternate Optional 7-12: additional bread/grain serving	No specific requirement
Juice/Fruit/Vegetable	Same as old meal pattern 100% juice (½ cup)	No specific requirement
Milk	8 fluid oz. required 6 fluid oz. Preschool Must offer variety	Must offer but no required amount Must offer milk fat variety
Offer versus Serve (OVS)	Same as Traditional meal pattern, may decline any 1 food item OVS is optional for all grades Students must select at least three food items from the four items offered.	Optional for all grades Milk must be offered Minimum of 3 menu items offered Minimum of 2 menu items selected May decline only 1 of the offered menu items (condiments are not considered menu items, so may be declined)

LUNCH
SUMMARY OF THE DIFFERENCES BETWEEN ENHANCED FOOD BASED AND NSMP

	Enhanced Food Based	NSMP/ANSMP (Assisted NSMP)
Menu Structure	4 components, at least 5 food items Enhanced Food Based Meal Pattern	3 or more menu items (One must be an "entree" and one must be milk**),** other = side dish
Nutrition Goals	1/3 RDA for lunch Dietary Guidelines for Americans Goals are age appropriate	Same as Food Based
Verification of Nutrition Goals	Not required to conduct a nutrient analysis, but must meet nutrient standards. Nutrient analysis completed by State agency	Weekly average nutrient analysis must meet nutrient standards.
Age/Grade Groupings	Grades: Preschool, K-6, 7-12 (K-3 optional) Lunch must have minimum of 2 grade groups for K-12	Grade: Preschool, K-6, 7-12 (K-3 optional) or Age: 3-6, 7-10, 11-13, 14-17, or Custom groupings Lunch must have minimum of 2 age/ grade groups for K-12
Creditable Items	Same as Traditional meal pattern except grain desserts count toward the grains/breads requirement. 8 oz. yogurt may now be credited as 2 oz. meat/meat alternate	All foods count (including desserts and condiments) except foods of minimal nutritional value unless these foods are combined with other creditable foods.
Meat/Meat Alternate	Same as Traditional meal pattern**,** with the addition of 8 oz. yogurt creditable as 2 oz. of meat/meat alternate	No specific requirement
Vegetables/Fruits	Increased to: ¾ cup/day K-3 ¾ cup/day + additional ½ cup per week K-6 1 cup/day 7-12	No specific requirement
Grains/Breads	Increased to: 14 servings/wk K-3 17 servings/wk K-6 21 servings/wk 7-12 Minimum of 1 serving per day	No specific requirement
Milk	8 fluid oz. K-12 6 fluid oz. Preschool Must offer variety	Must offer, but no required amount. Must offer milk fat variety.
Offer versus Serve (OVS)	Same as Traditional meal pattern; may decline any food item up to 2 food items. Must be offered to grade 7-12.	Entrée must be offered May not decline entree Milk must be offered/may be declined Minimum of 3 menu items offered Minimum of 2 menu items selected If more than 3 menu items are offered may decline only 2 of the offered menu items (condiments are not considered menu items, so may be declined). Must be offered to grade 7-12.

REQUIREMENTS FOR CONVENIENCE FOODS

When using a convenience food item in the Traditional or Food Based meal pattern, a Child Nutrition (CN) Label or a Product Specification Sheet is required to support the specific food item's contribution to the meal pattern.

CHILD NUTRITION (CN) LABEL

- A **voluntary federal labeling** program for the Child Nutrition Programs
- Provides a **warranty** for CN labeled products
- Allows manufacturers to state a product's contribution to the Traditional or Food Based Meal Pattern requirements on their labels

HOW TO IDENTIFY A CN LABEL

A CN label will always contain the following:

- The **CN** logo has a distinct border.
- The meal pattern contribution statement is essential for Traditional and Food Based Menu Planning systems.
- A product identification number [(1)] example (245678).
- **USDA/FCS** authorization statement.
- The month and year of approval.

SAMPLE LABEL

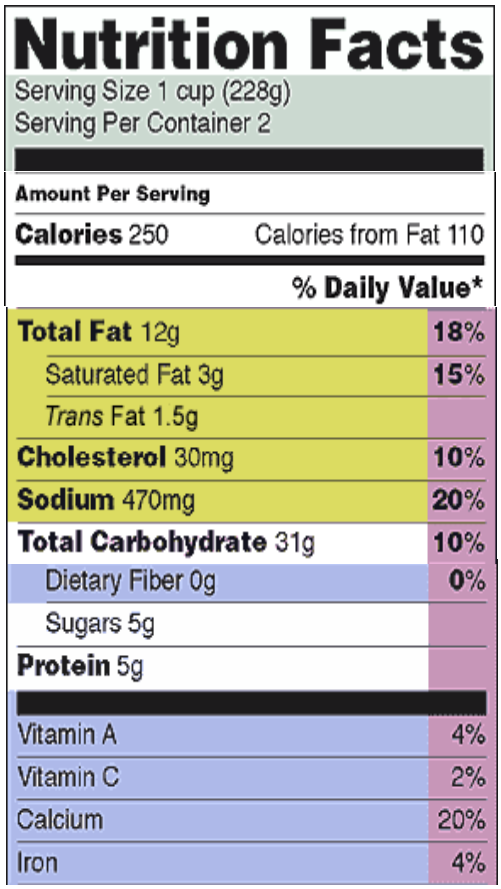
CN

[(1)]000000

This 5.00 oz. – Pizza with Ground Beef and Vegetable Protein product provides 2.00 oz. Equivalent meat/meat alternate, ½ cup serving of vegetable and 1 ½ servings of grains/breads for the Child Nutrition Meal Pattern Requirement. (Use of this logo and statement authorized by the Food and Consumer Services, USDA 05-97.)

CN

UNDERSTANDING NUTRITION FACTS LABELS



Nutrition Facts

Serving Size 1 cup (228g)
Serving Per Container 2

Amount Per Serving

Calories 250	Calories from Fat 110
	% Daily Value*
Total Fat 12g	**18%**
Saturated Fat 3g	**15%**
Trans Fat 1.5g	
Cholesterol 30mg	**10%**
Sodium 470mg	**20%**
Total Carbohydrate 31g	**10%**
Dietary Fiber 0g	**0%**
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

THE SERVING SIZE

Serving sizes are standardized to make it easier to compare similar foods.
The size of the serving on the food package influences the number of calories and all the nutrient amounts listed on the top part of the label.

Calories - Provide a measure of how much energy you get from a serving of this food.

THE NUTRIENTS

Limit These

The nutrients listed first are the ones Americans generally eat in adequate amounts, or even too much. They are total fat, saturated fat, trans fat, cholesterol, or sodium. In the NSLP program fat and saturated fat grams are converted into percentages of calories. Cholesterol and sodium standards are set by the State and currently there is no guidance on trans fats.

Get Enough of These

Most Americans don't get enough dietary fiber, vitamin A, vitamin C, calcium, and iron, in their diets. A fiber standard is set by the State, but the remaining nutrients, vitamin A, vitamin C, calcium, and iron have standards set by federal guidelines.